



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.

09/807,922

Confirmation No. 9298

Applicant

:

Friedrich BOECKING

Filed

: August 20, 2001

TC/A.U.

3752

Examiner

S. Ganey

Docket No.

R.35955

Customer No.

02119

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Date: November 19, 2004

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97(h)(1), AND EXPLANATION OF THE RELEVANCE OF THE CITED PRIOR ART

Sir:

The undersigned hereby requests that the prior art cited on the attached prior art statement be placed of record in the application file.

This citation of prior art is made under 37 CFR 1.97(h)(1), since it is being filed after the mailing date of the Notice of Allowance.

This prior art citation is being submitted under 37 CFR 1.97 (h)(1) because the prior art did not come to the attention of the undersigned until a time such that 37 CFR 1.97 (e) precluded consideration under 37 CFR 1.97 (d).

The undersigned asserts that the prior art cited on the attached form 1449 has been compared to the allowed claims, and that in the opinion of the applicant as well as the undersigned, the prior art cited on this form 1449 does not render any of the claims unpatentable.

The relevance of the prior art cited on the attached form 1449 is as follows:

After a Notice of Allowance

US 5,472,142

This patent teaches an accumulator fuel injection apparatus in which a nozzle element is divided into a first nozzle having one end side and a second nozzle having the other end side. The apparatus comprises a stopper for setting a maximum movement position of the first nozzle toward the second nozzle. A second pressure control chamber communicates with a first pressure control chamber and forms a predetermined space or interval through which the first nozzle and the second nozzle are spaced away from each other. This is done under the condition that the first nozzle is arranged at the maximum movement position. Also included is a delay apparatus for delaying the reduction of pressure within the first pressure control chamber due to the fact that fluid flows into a low-pressure chamber from the first pressure control chamber upon communication of the first pressure control chamber and the low-pressure chamber with each other. It is possible to easily perform operation of setting an amount of pre-lift of the nozzle needle which decides an injection rate, and operation of assembling constitutional elements thereof.

WO 98/25026

This patent teaches a device for reducing leaks and retarding the opening of constant pressure injection systems used in diesel engines. It is characterized by a control valve (25), returned by a valve spring (28), that is used as an actuator operating on the injecting needle (6) when the injecting nozzle (1) is closed. The control valve also closes the internal volume of the injecting nozzle holder (3) which communicates with the bottom of the injecting nozzle (1). This valve ensures, with the decompression orifice (27), the retarding of the opening of

After a Notice of Allowance

the injecting nozzle (1) at the beginning of the injection controlled by the operation of the electro-valve (4). The device is particularly designed for completing and improving the quasiconstant pressure injection devices for diesel engines.

DE 35 16 870 A1

This patent teaches an accumulation type fuel injector which is provided with an injector body and a needle valve guide having its one end fixed to the injector body. A nozzle body is fixed to the other end of the needle valve guide. The nozzle body is formed with an injection port and with an accumulation chamber. A needle valve is disposed in the accumulation chamber and is guided by the needle valve guide. A valve member is fitted in the injector body, and a check valve is guided by the valve member. A high-pressure fuel supply conduit is in communication with the accumulation chamber such that the needle valve opens when pressure in the fuel conduit is reduced. A controller guided by the valve member opens the check valve at the end of the fuel injection and a control piston guided by the injector body closes the needle valve.

US 4,674,688

This patent is in the same family as DE 35 16 870 A1 and is provided as an aid to the examiner.

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After a Notice of Allowance

EP 0 745 764 A2

This patent teaches a fuel injection valve for internal combustion engines. A control

device (15) regulates the adjustment movement of the injection valve component. It has a

longitudinally displaceable control piston (30), which is activated by the fuel system pressure

from the high pressure feed conduit (40,41) and also by the fuel control pressure in a control

chamber (60). The control chamber is connected via a first control aperture with the high

pressure feed conduit (40). The control pressure in the control chamber is controllable by the

opening or closing of at least one second control aperture. For the control device, an

electrically controllable operating component (5) is provided.

US 5,694,903

This patent is in the same family as EP 0 745 764 A2 and is provided as an aid to the

examiner.

Again, it is requested that the prior art cited on the attached form 1449 be placed of

record in the application file.

ctfully submitted,

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,	INFORMATION DISCLOSURE CITATION				Docket Number (Optional) R.35955 Applicant(s)		Аррисации (vumber 09/807,922			
	HARO	(Use several vicets if neces	isary)		Friedrich BOECKIN					
	NOV 1 9 2004				Filing Date 08-20-2001		Group Art Unit 3752			
					PATENT DOCUMENTS					
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE		NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE		
		5,472,142	12-05-1995	Takashi IWANAGA			·			
		4,674,688	06-23-1987	Hiroshi	KANESAKA					
		5,694,903	12-09-1997	Marco A	A. GANSER					
			U.S. PATEN	T APPLICA	TION PUBLICATIONS					
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	REF	DOCUMENT NUMBER DATE		COUNTRY CLASS		CLASS	SUBCLASS	YES	NO	
		WO 98/25026	06-11-1998	PCT	PCT				<i>-</i>	
		DE 35 16 870 A1	04-10-1986	Germany				<u>, </u>		
		EP 0 745 764 A2	12-04-1996	European				<u>, </u>		
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